SEQUENCE LISTING

<110> Genentech, Inc.

<120> BMCA POLYPEPTIDES AND USES THEREOF

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<140> New Filing
<141> 2004-08-04

<150> US 60/540,271
<151> 2004-01-29

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<170> PatentIn version 3.1

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Xaa Cys

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Tyr Cys

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Xaa Cys

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Xaa Cys

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Tyr Cys

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Pro Pro Leu Thr Cys Gln Arg Tyr Cys Asn Ala Ser Val Thr Asn Ser
35 40 45

Val Lys Gly Thr Asn Ala Ile Leu Trp Thr Cys Leu Gly Leu Ser Leu
50 55 60

Ile Ile Ser Leu Ala Val Phe Val Leu Met Phe Leu Leu Arg Lys Ile
65 70 75 80

Asn Ser Glu Pro Leu Lys Asp Glu Phe Lys Asn Thr Gly Ser Gly Leu
85 90 95

Leu Gly Met Ala Asn Ile Asp Leu Glu Lys Ser Arg Thr Gly Asp Glu
100 105 110

Ile Ile Leu Pro Arg Gly Leu Glu Tyr Thr Val Glu Glu Cys Thr Cys
115 120 125

Glu Asp Cys Ile Lys Ser Lys Pro Lys Val Asp Ser Asp His Cys Phe
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Pro Leu Pro Ala Met Glu Glu Gly Ala Thr Ile Leu Val Thr Thr Lys
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<213> Homo sapiens

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Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
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Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
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Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
65                  70                  75                  80

Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
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Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
            100                 105                 110

Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
        115                 120                 125

Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
    130                 135                 140

Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
145                 150                 155                 160

Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
                165                 170                 175

Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
            180                 185                 190

Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
        195                 200                 205

Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
    210                 215                 220

Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
225                 230                 235                 240
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Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
245 250 255

Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu
260 265 270

Asp Gly Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
275 280 285

<210> 24
<211> 309
<212> PRT
<213> Mus musculus

<400> 24

Met Asp Glu Ser Ala Lys Thr Leu Pro Pro Pro Cys Leu Cys Phe Cys
1 5 10 15

Ser Glu Lys Gly Glu Asp Met Lys Val Gly Tyr Asp Pro Ile Thr Pro
20 25 30

Gln Lys Glu Glu Gly Ala Trp Phe Gly Ile Cys Arg Asp Gly Arg Leu
35 40 45

Leu Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Ser Ser Phe Thr Ala
50 55 60

Met Ser Leu Tyr Gln Leu Ala Ala Leu Gln Ala Asp Leu Met Asn Leu
65 70 75 80

Arg Met Glu Leu Gln Ser Tyr Arg Gly Ser Ala Thr Pro Ala Ala Ala
85 90 95

Gly Ala Pro Glu Leu Thr Ala Gly Val Lys Leu Leu Thr Pro Ala Ala
100 105 110

Pro Arg Pro His Asn Ser Ser Arg Gly His Arg Asn Arg Arg Ala Phe
115 120 125

Gln Gly Pro Glu Glu Thr Glu Gln Asp Val Asp Leu Ser Ala Pro Pro
130 135 140

Ala Pro Cys Leu Pro Gly Cys Arg His Ser Gln His Asp Asp Asn Gly
145 150 155 160

Met Asn Leu Arg Asn Ile Ile Gln Asp Cys Leu Gln Leu Ile Ala Asp
165 170 175

Ser Asp Thr Pro Thr Ile Arg Lys Gly Thr Tyr Thr Phe Val Pro Trp
180 185 190

Leu Leu Ser Phe Lys Arg Gly Asn Ala Leu Glu Glu Lys Glu Asn Lys
195 200 205

Ile Val Val Arg Gln Thr Gly Tyr Phe Phe Ile Tyr Ser Gln Val Leu
210 215 220

Tyr Thr Asp Pro Ile Phe Ala Met Gly His Val Ile Gln Arg Lys Lys
225 230 235 240

Val His Val Phe Gly Asp Glu Leu Ser Leu Val Thr Leu Phe Arg Cys
245 250 255

Ile Gln Asn Met Pro Lys Thr Leu Pro Asn Asn Ser Cys Tyr Ser Ala
260 265 270

Gly Ile Ala Arg Leu Glu Glu Gly Asp Glu Ile Gln Leu Ala Ile Pro
275 280 285

Arg Glu Asn Ala Gln Ile Ser Arg Asn Gly Asp Asp Thr Phe Phe Gly
290 295 300

Ala Leu Lys Leu Leu
305

<210> 25
<211> 250
<212> PRT
<213> Homo sapiens

<400> 25

Met Pro Ala Ser Ser Pro Phe Leu Leu Ala Pro Lys Gly Pro Pro Gly
1 5 10 15

Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala Leu Trp
20 25 30

Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala Met Ala Leu
35 40 45

Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg Glu Val Ser Arg

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     50                  55                  60

Leu Gln Gly Thr Gly Gly Pro Ser Gln Asn Gly Glu Gly Tyr Pro Trp
65                  70                  75                  80

Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala Leu Glu Ala Trp Glu Asn
                85                  90                  95

Gly Glu Arg Ser Arg Lys Arg Arg Ala Val Leu Thr Gln Lys Gln Lys
            100                 105                 110

Lys Gln His Ser Val Leu His Leu Val Pro Ile Asn Ala Thr Ser Lys
        115                 120                 125

Asp Asp Ser Asp Val Thr Glu Val Met Trp Gln Pro Ala Leu Arg Arg
    130                 135                 140

Gly Arg Gly Leu Gln Ala Gln Gly Tyr Gly Val Arg Ile Gln Asp Ala
145                 150                 155                 160

Gly Val Tyr Leu Leu Tyr Ser Gln Val Leu Phe Gln Asp Val Thr Phe
                165                 170                 175

Thr Met Gly Gln Val Val Ser Arg Glu Gly Gln Gly Arg Gln Glu Thr
            180                 185                 190

Leu Phe Arg Cys Ile Arg Ser Met Pro Ser His Pro Asp Arg Ala Tyr
        195                 200                 205

Asn Ser Cys Tyr Ser Ala Gly Val Phe His Leu His Gln Gly Asp Ile
    210                 215                 220

Leu Ser Val Ile Ile Pro Arg Ala Arg Ala Lys Leu Asn Leu Ser Pro
225                 230                 235                 240

His Gly Thr Phe Leu Gly Phe Val Lys Leu
                245                 250
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<210> 26
<211> 240
<212> PRT
<213> Mus musculus

<400> 26

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Met Pro Ala Ser Ser Pro Gly His Met Gly Gly Ser Val Arg Glu Pro
1               5                   10                  15
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Ala Leu Ser Val Ala Leu Trp Leu Ser Trp Gly Ala Val Leu Gly Ala
            20                  25                  30

Val Thr Cys Ala Val Ala Leu Leu Ile Gln Gln Thr Glu Leu Gln Ser
        35                  40                  45

Leu Arg Arg Glu Val Ser Arg Leu Gln Arg Ser Gly Gly Pro Ser Gln
    50                  55                  60

Lys Gln Gly Glu Arg Pro Trp Gln Ser Leu Trp Glu Gln Ser Pro Asp
65                  70                  75                  80

Val Leu Glu Ala Trp Lys Asp Gly Ala Lys Ser Arg Arg Arg Arg Ala
                85                  90                  95

Val Leu Thr Gln Lys His Lys Lys Lys His Ser Val Leu His Leu Val
            100                 105                 110

Pro Val Asn Ile Thr Ser Lys Asp Ser Asp Val Thr Glu Val Met Trp
        115                 120                 125

Gln Pro Val Leu Arg Arg Gly Arg Gly Leu Glu Ala Gln Gly Asp Ile
    130                 135                 140

Val Arg Val Trp Asp Thr Gly Ile Tyr Leu Leu Tyr Ser Gln Val Leu
145                 150                 155                 160

Phe His Asp Val Thr Phe Thr Met Gly Gln Val Val Ser Arg Glu Gly
                165                 170                 175

Gln Gly Arg Arg Glu Thr Leu Phe Arg Cys Ile Arg Ser Met Pro Ser
            180                 185                 190

Asp Pro Asp Arg Ala Tyr Asn Ser Cys Tyr Ser Ala Gly Val Phe His
        195                 200                 205

Leu His Gln Gly Asp Ile Ile Thr Val Lys Ile Pro Arg Ala Asn Ala
    210                 215                 220

Lys Leu Ser Leu Ser Pro His Gly Thr Phe Leu Gly Phe Val Lys Leu
225                 230                 235                 240
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<210> 27
<211> 11

<212> PRT
<213> Artificial Sequence

<220>
<223> MBP-Ac1-11 (a synthetic NH2-terminal peptide of Myelin Basic Protein)

<400> 27

Ala Ser Gln Lys Arg Pro Ser Gln Arg Ser Lys
1 5 10

<210> 28
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Formula I

<220>
<221> MISC_FEATURE
<222> (2)..(5)
<223> Xaa is any amino acid except cysteine

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is any amino acid except cysteine

<220>
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<222> (9)..(9)
<223> Xaa is any amino acid except cysteine

<220>
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<222> (11)..(11)
<223> Xaa is any amino acid residue except Ala and cysteine

<220>
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<222> (12)..(13)
<223> Xaa is any amino acid except cysteine

<220>
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<222> (16)..(16)
<223> Xaa is any amino acid except cysteine

<220>
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<222> (18)..(19)

<223> Xaa is any amino acid except cysteine

<220>
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<223> Xaa is any amino acid except cysteine

<220>
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<222> (31)..(33)
<223> Xaa is any amino acid except cysteine

<400> 28

Cys Xaa Xaa Xaa Xaa Tyr Xaa Asp Xaa Leu Xaa Xaa Xaa Cys Lys Xaa
1 5 10 15

Cys Xaa Xaa Arg Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
20 25 30

Xaa Cys

<210> 29
<211> 64
<212> PRT
<213> Artificial Sequence

<220>
<223> Z-domain of Staphylococcal protein A

<400> 29

Ala Gln His Asp Glu Ala Val Asp Asn Lys Phe Asn Lys Glu Gln Gln
1 5 10 15

Asn Ala Phe Tyr Glu Ile Leu His Leu Pro Asn Leu Asn Glu Glu Gln
20 25 30

Arg Asn Ala Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser Gln Ser Ala
35 40 45

Asn Leu Leu Ala Glu Ala Lys Lys Leu Asn Asp Ala Gln Ala Pro Lys
50 55 60

<210> 30
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> MiniBR3

<400> 30

Thr Pro Cys Val Pro Ala Glu Cys Phe Asp Leu Leu Val Arg His Cys
1 5 10 15

Val Ala Cys Gly Leu Leu Arg Thr Pro Arg
20 25

<210> 31
<211> 296
<212> PRT
<213> Artificial Sequence

<220>
<223> BCMA-(I22K)-Fc fusion

<400> 31

Met Ser Ala Leu Leu Ile Leu Ala Leu Val Gly Ala Ala Val Ala Ser
1 5 10 15

Thr Ala Gly Gln Cys Ser Gln Asn Glu Tyr Phe Asp Ser Leu Leu His
20 25 30

Ala Cys Lys Pro Cys Gln Leu Arg Cys Ser Ser Asn Thr Pro Pro Leu
35 40 45

Thr Cys Gln Arg Tyr Cys Asn Ala Ser Val Thr Asn Ser Val Lys Gly
50 55 60

Val Thr Asp Lys Ala Ala His Tyr Thr Leu Cys Pro Pro Cys Pro Ala
65 70 75 80

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
85 90 95

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
100 105 110

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
115 120 125

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
130 135 140

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln

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145                 150                 155                 160

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
                165                 170                 175

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
            180                 185                 190

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
        195                 200                 205

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
    210                 215                 220

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
225                 230                 235                 240

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
                245                 250                 255

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
            260                 265                 270

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
        275                 280                 285

Ser Leu Ser Leu Ser Pro Gly Lys
    290                 295
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<210> 32
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide epitope

<400> 32

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Met Ala Asp Pro Asn Arg Phe Arg Gly Lys Asp Leu Gly Gly
1               5                   10
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<210> 33
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Formula II

<220>
<221> MISC_FEATURE
<222> (2)..(5)
<223> Xaa is any amino acid except cysteine; and provided that the Formula II does not comprise the sequence CSQNEYFDSLLHACIPCQLR CSSNTPPLTCQRYC

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is selected from the group consisting of Tyr, Ala, Asp, Ser and Phe

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is any amino acid except cysteine; and provided that the Formula II does not comprise the sequence CSQNEYFDSLLHACIPCQLR CSSNTPPLTCQRYC

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa is any amino acid except cysteine; and provided that the Formula II does not comprise the sequence CSQNEYFDSLLHACIPCQLR CSSNTPPLTCQRYC

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is any amino acid residue except Ala

<220>
<221> MISC_FEATURE
<222> (12)..(13)
<223> Xaa is any amino acid except cysteine; and provided that the Formula II does not comprise the sequence CSQNEYFDSLLHACIPCQLR CSSNTPPLTCQRYC

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is any amino acid residue except Ala or Lys

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> Xaa is any amino acid except cysteine; and provided that the Formula II does not comprise the sequence CSQNEYFDSLLHACIPCQLR CSSNTPPLTCQRYC

<220>
<221> MISC_FEATURE
<222> (18)..(18)
<223> Xaa is Asp

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> Xaa is any amino acid except cysteine; and provided that the Formula II does not comprise the sequence CSQNEYFDSLLHACIPCQLR CSSNTPPLTCQRYC

<220>
<221> MISC_FEATURE
<222> (20)..(20)
<223> Xaa is Tyr

<220>
<221> MISC_FEATURE
<222> (22)..(29)
<223> Xaa is any amino acid except cysteine; and provided that the Formula II does not comprise the sequence CSQNEYFDSLLHACIPCQLR CSSNTPPLTCQRYC

<220>
<221> MISC_FEATURE
<222> (31)..(33)
<223> Xaa is any amino acid except cysteine; and provided that the Formula II does not comprise the sequence CSQNEYFDSLLHACIPCQLR CSSNTPPLTCQRYC

<400> 33

Cys Xaa Xaa Xaa Xaa Xaa Xaa Asp Xaa Leu Xaa Xaa Xaa Cys Xaa Xaa
1 5 10 15

Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
20 25 30

Xaa Cys